ORIGINAL LECTURES.

TUMOR OF THE MALE BREAST

AND

CYST OF THE NECK,

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[REPRINTED FROM THE OHIO MEDICAL AND SURGICAL JOURNAL.]

COLUMBUS:
NEVINS & MYERS, BOOK AND JOB PRINTERS.
1878.

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CLINICAL LECTURES ON SURGERY DELIVERED AT STARLING MEDICAL COLLEGE, COLUMBUS, O., BY J. H. POOLEY, M.D., PROF. OF SURGERY.

LECTURE III.

Tumor of the Male Breast—Cyst of the Neck.

The patient I now present to you, for the last time, is one whose case, no doubt, you all remember, but as I wish to make it the subject of somewhat extended remarks, I will briefly recapitulate the main facts in connection with it. Michael Burke, forty-five years of age, a native of Ireland, and a laborer in a rolling mill, came before us two weeks ago on account of a tumor which had developed itself in his right breast.

He is a perfectly healthy, and very robust and muscular man. Seven or eight months ago he noticed the tumor for the first time, since when it grew steadily, and rather rapidly, up to the time of our first seeing him. On that occasion we found the situation of the right breast occupied by a tumor, as large as the largest-sized hen's egg, but not of that shape, having rather the form of a normally developed mamma of a young girl at puberty. It was hard and firm, quite so, but not stony-hard, like scirrhus. It was freely movable over the pectoral muscle; the skin over it was unattached, except just at the nipple. It was not, and never had been painful, but the fact of its existence annoyed him. He had got into the habit of frequently handling it, watching its growth, and worrying over it, and was anxious to have it removed He said he had never received any blow or injury in that region, neither was it habitually pressed upon in his usual

occupation; he could think of no reason for the appearance of the tumor; he had never heard of any cancer or tumors in any of his relations. The opinion was expressed that the tumor was benign in character, probably either a fibroma, or a firm lipoma, but we declined to venture upon an absolute diagnosis until after its removal. This was done by an operation exactly similar to that for removal of the female breast, and which I need not say anything about—one ligature was applied to an artery that bled rather persistently after the oozing had stopped, the wound was washed out with a solution of carbolic acid, one drachm to the pint of water, closed acurately, with numerous points of fine suture, and a compress and firm bandage applied.

More than half of it healed at once, by first intention; the rest is now, as you see, well, and to-day he leaves the hospital.

After the removal of the tumor, we made a section of it in your presence, and even then were unable to determine its character, but could only say again it was either a fibrous tumor, or a very firm lipoma, with a leaning toward the latter opinion. We have now the results of a careful examination made by Dr. Frankenberg, our Professor of Pathological Anatomy.

The Professor says: "Microscopical examination of the tumor removed from Michael Burke, and referred to me for examination, shows that its elements are fibrous tissue in abundance, fat cells containing oil, and occasionally a collection of small cells, some of which are of an irregular shape, others round. The fat cells are arranged in layers extending through an entire section, and separating the fibrous tissue or stroma, but there seems to be no regularity in the arrangement of these fat layers, but whenever they are found they are somewhat extensive. Cavities are also found which resemble those of acini found in the gland tissue of the breast, lined with epithelial cells. The small cells

spoken of above are grouped together in masses varying in size; they appear to be lencocytes with granular matter."

From this description, it appears that our tumor was an unusually firm lipoma, that is, one with unusual development of fibrous tissue or stroma developed in the rudimentary gland tissue of the male breast, and probably by its presence and growth provoking some hypertrophy of that tissue.

Now, gentlemen, this is a very interesting case—interesting from its rarity, for all tumors—all diseases of the male breast—are more or less rare. To show you how rarely tumors are met with in the male in this region, I may mention that Dr. John Chiene has collected, in an article in the Edinburgh Medical Journal, for July, 1871, all the cases of tumors of the breast admitted into the Edinburgh Royal Infirmary, under Mr. Syme's care, during a period of thirty-six years, from 1833 to 1869, and from this record it appears that in a total of 247 cases only two were in the male. One of these was a fibrous tumor, removed with successful result; the other a scirrhus tumor, which returned *in loco* in a year. Very few men have ever had such a clinical experience as this of Mr. Syme, and if he found only two tumors of the male breast, we may conclude that they are rare enough to be of interest.

Dr. John C. Warren, of Boston, whose field was extensive and his experience enormous, and who wrote a work on tumors, only refers to two cases of tumor of the male breast, and Dr. J. Mason Warren, in his work entitled "Surgical Cases and Observations," only mentions one case of the kind.

You find very little information—indeed, I might say none at all—in the ordinary text-books of surgery on the subject of diseases of the male breast, and not much more in the special works of Velpeau, Birkett, and Astley Cooper.

Such being the case, and our attention being called to it by the patient before us, perhaps it will be both interesting

and profitable for us to spend some little time upon the subject.

This rarity of disease in the male breast is owing, of course, to its small and undeveloped state, and absence of function, the general rule being, that organs of the most perfect development and greatest functional activity, are most subject to disease. Hence, the great liability of the female breast to various forms of inflammation, tumor, and cancer. Generally speaking, the male breast is in so rudimentary a condition as to escape recognition altogether, the mammilla and its surrounding areola alone marking the site of the organ. But, however small and undeveloped, the rudiments of a gland do exist, and in certain exceptional cases, and in some instances of disease, become quite conspicuously developed.

All authors on the subject mention individuals of the male sex in whom the mammary development has been remarkably full, though many of these have no doubt been mere local development of adipose tissue, or at least principally such.

Sir Astley Cooper gives a detailed account of a young man whose breasts were unusually developed, and remarks that he was of a slender and effeminate form, and that his testicles were remarkably small, and hints his belief that this will generally be found the case in such instances.

Not only has large size of the gland sometimes been noticed in masculine subjects, but true functional activity or secretion of milk has been observed in quite a number of authentic and undoubted instances. Dr. Young communicated one case to Sir Astley Cooper, and Humboldt, Franklin, Dunglison, Blumenbach, and others relate cases. The fullest account of this kind that I know of is one by Dr. Schmetzer, of Heilbronne, in Schmidt's Jahrbucher, for 1837, and quoted in the American edition of "Cooper on the Breast." The subject of it was a sanguine, robust soldier, twenty-two

years old. When eighteen years old he often felt a pricking sensation in his breasts, and slight periodical colic. About a year later, after each occurrence of such symptoms, a slight swelling of, and milky discharge from the mammæ; and during work, his shirt was several times a week wetted with it. When in the hospital for acute rheumatism a considerable quantity of milk was found to be secreted. On examining the breast and nipples, the latter were found highly red, erectile, and somewhat cracked at their apices, and much higher than in men generally, and surrounded by a somewhat darker areola, through which a subjacent, vascular network could be seen. On pressing the papilæ, two or three fine streams of milk would jet out of minute orifices; it had a bluish-white color, and a very sweet taste. The secretion was constant, but increased at various periods, especially at night, producing a somewhat painful sensation until it was evacuated. The usual quantity was from half an ounce to an ounce daily, but sometimes not more than two or three drachms. On one occasion a wineglassful was drawn off, and in the fortnight that he was under observation, ten or eleven ounces were secreted. After the evacuation of it, he said he always had headaches, faintness, and sometimes pains in the abdomen. Diet had no material influence on the secretion. Collected in a glass and left quiet, cream soon separated, and sometimes the milk at once coagulated. After some hours standing, the butter separated and floated at the top in yellow drops. The milk had a slightly alkaline reaction. Its specific gravity was 1.024.

In this case we see that, though there was an undoubted and continuous secretion of milk, it was in small quantity, and I think it highly probable that the stories of men who have suckled and nourished infants at their own breasts are to be taken with many grains of allowance. Ordinarily, as you know very well, only two mammillæ are seen; one upon the anterior surface of either pectoral muscle, and over the

fourth ribs. Deviations from the normal number are, however, seen, and Birkett says he has collected four cases, and witnessed one himself. The following is the account of the case he saw, which was in an adult male, two nipples being in the usual situations, and two below, over the fifth ribs. The two abnormal nipples were smaller than the others, but the areolæ were distinct. One female child, the progeny of this man, the fourth, was born with four nipples, but she lived only to her fifth year. Of twelve children she was the only one inheriting this peculiarity. With the man, as far as his inquiries extended, it was not hereditary.

In young infants, male equally with female, there is often an engorgement of the breasts, with a milky fluid. Sir Astley Cooper seems to have considered this as a constant phenomenon; but in this no doubt he was mistaken; it is, however, very common.

This of itself is a matter of no consequence, but very often officious and ignorant nurses and mothers in their efforts to milk and squeeze out this fluid provoke by their manipulations inflammation, and even abscess of the mammæ. I have been obliged to open many such abscesses, some of them of quite large size. You ought to know about this that you may warn the attendants against their pernicious interference. Should the breast seem to be distended and irritated with this secretion, very gentle rubbing with a liniment of sweet oil and belladonna will suffice to disperse it. Should the heat and redness show that inflammation is imminent, or has actually taken place, you may try to prevent abscess by the application of cooling lead lotions, or, failing in this, apply a warm poultice, and when the matter is perfectly apparent make a slight puncture and evacuate it. At the period of puberty it occasionally happens in the male, as well as the female, that the breasts enlarge and become somewhat painful. This generally subsides in a short time, and needs no attention, but now and

then more or less enlargement remains permanent, and it is said, that when this has been confined to one side, such breasts have been removed on suspicion of cancer. Concerning this enlargement of the breasts in young men, there is a very curious passage in Paulus Ægineta, which I give you from the Sydenham Society's translation, by Mr. Francis Adams, together with the commentary of the learned translator:

"As at the season of puberty the breasts of females swell up, so in like manner those of the males also swell to a certain extent; but for the most part they subside again. In some cases, however, having acquired a beginning they go on increasing, owing to the formation of fat below.

"Wherefore, as this deformity has the reproach of effeminacy, it is proper to operate upon it. Having, therefore, made a lunated incision below the breast, and dissected away the skin, we unite the parts by sutures.

"But if, as in women, the breast incline downward, owing perhaps to its magnitude, we make in it two lunated incisions, meeting together at the extremities, so that the smaller may be comprehended by the larger, and dissecting away the intermediate skin, and removing the fat, we use sutures in like manner. But if through mistake we should cut away too little, we must again remove what is redundant, and apply the remedies for fresh wounds."

"Commentary: The description given by Albucasis is so like our author's, that there can be no doubt of its being borrowed from him. When there is a great redundance of fat and flesh, he directs us to make two lunated incisions, the larger comprehending the smaller, and having dissected away the intermediate skin to unite the edges by sutures.

"Haly Abbas repeats the same description in almost the same words. Rhases recommends the operation upon the authority of Antyllus and our author."

Whether we are to conclude with Velpeau, from this re-

markable passage, that the enlargement referred to was common among the ancients, I cannot decide, but one thing we may safely do, and that is, to disregard the recommendations of these ancient authors, and omit this operation from modern surgery.

Not only at the infantile age, but at all periods of life we may meet with abscess of the male breast, but after infancy it is very rare.

Heister mentions having opened such an abscess, which discharged two pounds of matter. Bransby Cooper also mentions a case, of nearly the same magnitude. Such abscesses may be caused by local violence, as from a blow, or arise spontaneously; but however they originate their treatment is the same as that of purulent collections elsewhere, and does not need any particular description. They are much milder in their symptoms, and less liable to be followed by intractable sinuses than abscesses of the female breast.

Though information on the subject is very meager, I think we may say that of tumors of the male breast the malignant are the most common—two to one. Schirrus is the common form of cancer in this situation, though both epithelioma and encephaloid have been met with. There is nothing peculiar in these cases that need detain us, except to remark that it seems to be the fact that malignant disease advances much less rapidly here than in the female breast, nor is so likely to return, and when it does, not so quickly; the prognosis, in short, is better.

Among the benignant tumors we find enumerated by authors—cysts, very rare; adenoid tumors, butyraceous tumors, very rare; calcareous tumor, one example, by Morgagni.

I do not know of a recorded case exactly like the one that we have had before us, but, as I have already said, the subject is a difficult one, information upon it being scanty, and hard to get at, so that we cannot advance any very dogmatic

statement, but could not let so rare an opportunity pass without some attempt to improve it.

CYST OF THE NECK.

The patient we now introduce was before us three weeks ago, with a large tumor of the neck, and to-day he comes to show himself entirely cured. His name is William Kinney, native of Ireland, laborer in a foundry, age, 41 years. About a year before his first visit to the clinic, he began to notice a swelling on the right side of his neck, just below the angle of the jaw, and behind the sterno mastoid muscle. It had grown steadily, and at the time of his visit was a large, conspicuous, and disfiguring tumor, measuring four inches in its longest, and two in its shortest diameter. It was perfectly smooth and regular in its outline, free from lobulation, tense and firm, but not hard in consistence.

It gave an obscure feeling of fluctuation, and yielded, upon exploration with the needle of a hypodermic syringe, an ounce of clear, straw-colored fluid, thus settling definitely its character as a cyst or hygroma, or, as it is sometimes rather awkwardly called, hydrocele of the neck. The subjective symptoms connected with this tumor were slight, but rather peculiar and characteristic; there was very little—scarcely any—pain, but a feeling of disagreeable fullness in the head, sometimes connected with buzzing or whizzing noises, and when he stooped down, as he was obliged to do at his work, these became so severe that he was at last compelled to relinquish his employment. You recognize in these phenomena, of course, evidence of interference with the return circulation from the brain. He had painted the surface of the tumor persistently with tincture of iodine, and also taken some medicines, of the nature of which he was ignorant, internally, all to no purpose.

Having satisfactorily established the diagnosis, I proceeded in your presence to introduce a medium-sized trocar, through

which I evacuated three ounces, by measurement, of a clear, straw-colored, slightly viscid fluid, which was highly albuminous, becoming nearly solid upon the application of heat, but under the microscope showed a complete absence of structural elements. The trocar was introduced at the lowest part of the tumor, about half way between the mastoid process and the clavicle, and after the evacuation of the fluid, was left in situ, while an eyed probe was passed through it; the end of the probe was thus passed along the sac and made to protrude the integument at its upper end, when a slight incision—a mere puncture in fact—was made through the intervening tissues, the probe passed through, and by its means a seton, consisting of four strands of coarse ligature silk, with which its eye had been threaded, drawn through the longest diameter of the tumor, and tied loosely over the outside. This operation was performed on a Saturday, and I saw him every day afterward, and moved the seton to and fro, until the following Tuesday evening, when the inflammation resulting from it was quite marked, and it was withdrawn.

The tumor at this time was about half as large as it was at first, and hot and red, with a few drops of pus exuding from the lower puncture. It was evident to a careful palpation that a good deal of the swelling present at this time was in the tissues outside the cyst. This inflammation and swelling soon subsided, and the man presents himself to-day absolutely cured of a serious and deforming tumor, with no scar, scarcely any pain, and absolutely no danger in the process.

Tumors of the neck are among the most interesting and important of all surgical diseases. They may be divided, for convenience sake, into the solid and the cystic, with the latter of which only we shall concern ourselves at this time.

And first among these we have to speak of the cystic degenerations of the thyroid body, the so-called cystic goitre

or bronchocele. These consist of cysts of greater or less size, developed in an already enlarged thyroid. Their size is various; sometimes they present themselves as numerous small sacs disseminated through the substance of the bronchocele; again they may occupy its centre, their parieties consisting of the thickened tissue of the enlarged thyroid; or they may be grafted upon it as it were, or developed from its exterior. Their size is sometimes very great, and, occasionally, by growing inward as well as outward, they press upon the trachea and interfere with respiration. Their contents are very various, sometimes blood, sometimes clear yellow serum, but more frequently a thick, glairy, sticky fluid, of a dirty brown or gray color. They may be diagnosticated by their situation, by rising and falling with the larynx in the act of deglutition, by a feeling of fluctuation more or less distinct, and by the use of the exploring needle or trocar. But they often escape recognition, and are confounded with the other forms of bronchocele, on account of their depth from the surface, and not only the thickness, but also the soft, spongy character of the overlying tissues. Their treatment, as far as they require any treatment aside from the general treatment of the goitre, consists in the evacuation of their contents. But it is not of cystic goitre, to which I may sometime return in connection with the general subject of enlargement of the thyroid, that I wish to speak now particularly, but of the other forms of cyst of the neck. Of these I may just mention, as rare forms, the pre-laryngeal bursal tumors, and bursa of the hyoid bone, which are so seldom met with that I do not deem it best to complicate the subject by any attempt at a thorough description of them now. The cysts of the neck most commonly met with, are found in the lateral cervical regions, and resemble in all essential particulars the case which we have been studying together, and which has prompted these remarks. Their pathology, I must confess, is to my mind

quite obscure. Whether they are degenerations of a peculiar kind of cervical lymphatic ganglia, sacs formed by inflammatory isolation of certain areas of cervical fascia, or entirely new formations, can not be definitely asserted. But one thing seems highly probable; that is, that as they differ in size, shape, and contents, they also probably differ in origin.

Occasionally, cysts, like those of other parts of the body with steatomatous or melicerous contents, are found here, but they are not common. And why these larger and peculiar cysts should affect this region by preference, we can not say.

Some years ago, I met with a man who had, on one side of the neck, near the median line, but unconnected with the thyroid body, a cyst as large as, and very nearly the shape of, a goose's egg, projecting from the surface, as though the egg had been attached by its smaller extremity, and with a tendency to become pendulous. I wanted him to let me puncture it, but he refused, and told me that some time before a celebrated New England surgeon had punctured it with a pretty large trocar, and nothing but blood had come out, but this had come out in such quantity and with such persistence that he had very nearly lost his life by it, and he was determined not to have it meddled with any more; and no doubt he was quite right. The hemorrhage in this case may have been from some thin-walled and dilated vessel in the cyst, which gave way from the sudden withdrawal of the fluid support from within. The man's account was too vague to enable one to judge definitely; but this is one of the possible dangers in such cases.

When these cysts are small and deeply situated, their diagnosis is difficult, sometimes impossible, without the use of the exploring needle. This was the case in a patient under my charge last summer—a young lady, in whom there was a deep-seated and ambiguous swelling of small size, situated under and projecting slightly behind the sterno mastoid

muscle. Exploratory puncture showed it to be a simple cyst, and it was cured by the injection of a few drops of tincture of iodine with a hypodermic syringe. The diagnosis of one of these tumors would rest upon the following points: the swelling in one of the lateral regions of the neck, smooth, unlobulated, round or more generally ovoid in shape, tense rather than hard in feel, sometimes with fluctuation, more often without or with this symptom obscure, yielding somewhat to firm pressure and then returning to its shape when the finger is withdrawn. Though such an assemblage of symptoms as this might suffice to establish the diagnosis, still it will always be better to confirm it by a careful exploratory puncture, avoiding, of course, the vicinity of large vessels or superficial veins. With such precaution, and a small instrument, exploration will always be safe and proper.

The prognosis of these tumors is concerned only with their unsightliness, and such unpleasant symptoms as arise from interference with circulation from pressure; they do not increase indefinitely as a rule, and rarely reach a size much larger than in our patient. The most considerable exception to this with which I am acquainted is a very large one recorded by Dr. J. Mason Warren, which reached from the mastoid process to the clavicle, and from the trachea to the vertebral column.

With regard to treatment, four plans present themselves for consideration—excision, incision, injection with tincture of iodine, and seton. We leave out of view altogether external applications, and the administration of medicines, as unworthy even of trial.

Excision is to be avoided, if possible, as it is a difficult, severe, and dangerous operation. Though these growths seem to be freely movable, and unconnected with the deeper part, this is frequently delusive, and the posterior wall of the cyst is often firmly matted to important veins, arteries,

and nerves, so that its dissection would be exceedingly tedious and precarious. Besides, such an operation has the disadvantage of leaving a very disfiguring scar. It is, therefore, to be avoided, if possible.

Free incision of the growth, and stuffing with lint, that it may fill up with granulations, is equally objectionable; indeed, more so, as being less radical and certain. It would leave even a worse scar, would involve long suppuration, which might extend to the deep fascia of the neck and become dangerous. Unless it be in some rare emergency, it is to be condemned.

Injection of these cyst with tincture of iodine is an excellent mode of treatment, and deservedly in high favor with surgeons. I do not know with whom it originated. At a recent congress of German surgeons, Esmarch spoke very strongly in favor of it, and mentioned a number of cases in which he had used it successfully. The details of the operation are very simple. After the evacuation of its contents, the cyst is injected with a small quantity of tincture of iodine, proportionate to its size, which is brought in contact with all parts of the interior by gently rubbing and kneading the tumor. It causes more or less active inflammation, often with slight suppuration, and final disappearance of the disease. But it is not infallible. It sometimes fails, and sometimes it sets up an undesirable amount of inflammation.

The plan of treatment by the introduction of a seton, which we have used with such gratifying success in this patient, originated, I think, with some French surgeon, whose name I have forgotten, about 1836 or 1837. This, certainly, is a very excellent mode of treatment, and if it always acted as perfectly as in the present instance, would leave nothing to be desired. But it, also, fails sometimes. At a meeting of the Philadelphia College of Physicians, held January 17, 1872, Dr. Walter F. Atlee reported a case of

this form of tumor occupying the submaxillary region on the left side. The patient was a young man, aged twenty-five years. The tumor was about the size of a goose-egg, and had existed for several years. For more than a year attempts had been made to effect a cure by means of a seton, injections of iodine, and by repeated tappings. Extirpation, which had been delayed on account of its extreme difficulties and dangers, was finally resorted to, and the patient recovered. It seems to me that extirpation should be confined to cases like this, in which other means have been tried and failed.

As between injection of iodine, and seton, both excellent plans, both supported by the authority of great names, and with both of which I have obtained perfect cures, have we anything to guide us to a choice? Yes, I think we have. Where the tumor is large, particularly where it is of such a shape, and so situated that a large portion of the cyst is in contact with the deep structures of the neck, the seton is to be preferred, because we can withdraw it at pleasure, and thus, to some extent at least, limit the amount of inflammation which is set up, whereas the tinct. iodine once injected, we have no control over the result, which, in such cases as those indicated, may proceed to an undesirable extent. If, however, the tumor is small, or has but a limited attachment, we may, perhaps, prefer the tinct. iodine, as rather less painful and annoying to the patient. Whichever of these plans of treatment is resorted to, if it fails, we should then try the other, and failing in both, then have recourse to extirpation.